



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/002,639	10/24/2001	Cesar C. Carriazo	CARA/0013	1980
24945	7590	11/19/2003		
STREETS & STEELE 13831 NORTHWEST FREEWAY SUITE 355 HOUSTON, TX 77040			EXAMINER DAVIS, DANIEL J	
			ART UNIT 3731	PAPER NUMBER 11
DATE MAILED: 11/19/2003				

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/002,639

Applicant(s)

CARRIAZO, CESAR C.

Examiner

D. Jacob Davis

Art Unit

3731

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on Amendment B 10/8/03.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(c) which forms the basis for all obviousness rejections set forth in this Office action:

(c) Subject matter developed by another person, which qualifies as prior art only under one or more of subsections (e), (f), and (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

Claims 1-10 are rejected under 35 U.S.C. 103(c) as being anticipated by U.S. Patent No. 6007,553 to Hellenkamp et al. in view of U.S. Pub. No. 2003/0045895 to Ross et al. In Fig. 2 Hellenkamp discloses a ring 32 having an annular vacuum channel (Fig. 4), and an aperture (Fig. 2). The patent further discloses inferior and superior engaging surfaces. However, what applicant refers to as the superior engaging surface in the Specification of the present application, the examiner interprets as both the superior and the inferior engaging surfaces. The engaging surface illustrated in Fig. 5 may be cut in half in a direction perpendicular to the longitudinal axis of the surgical device (or into the page). The result is two surfaces, an inferior and a superior.

Hellenkamp teaches a circular ring and is silent regarding aspherical inferior and superior engaging surfaces that are aspherical. Nevertheless, Ross teaches a vacuum ring insert 274' (Figs. 18-20) that is aspherical, specifically elliptical (Paragraph 66). He teaches that the elliptical nature of the ring insert "allows the flap 286 to be longer and provides additional corneal area that can be ablated in a LASIK procedure." Although

Art Unit: 3731

he does not teach that the ring itself is aspherical, Ross' ring insert is comparable to Hellenkamp's ring since it is the insert that engages the surface of the eye. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Hellenkamp's circular shaped ring to be elliptical, as taught by Ross, to "allow[s] the flap 286 to be longer and provide[s] additional corneal area that can be ablated in a LASIK procedure."

In claim 1, examiner interprets "aspherical engaging surface" to mean that the curvature of the engaging surface is irregular. In other words, if a hard and perfect sphere were placed within an aspherical engaging surface of a ring, some portions of the ring engaging surface would not contact the perfect sphere due to variability in surface curvature. "Aspherical engaging surface" is *not* a functional limitation; it is a structural limitation. To the contrary, "aspherical ocular globe-engaging surface" is a functional limitation. To meet this limitation, all that is required is that the prior art device be capable of performing the function.

Since the ring of the Hellenkamp/Ross device is elliptical, the superior and inferior engaging surfaces comprise a plurality of meridians, each meridian having a different radii. The engaging surfaces are concave and beveled. Hellenkamp discloses that the ring is made of stainless steel (Col. 6, lines 65-67).

Claims 11-20 are rejected under 35 U.S.C. 103(c) as being obvious over U.S. Patent No. 6007,553 to Hellenkamp et al. in view of U.S. Pub. No. 2003/0045895 to Ross et al. and in further view of U.S. Patent No. 6,506,198 to Amano. The

Art Unit: 3731

Hellenkamp/Ross combination teach the limitations of claim 11 as described in the rejection of claims 1-10, but fail to teach a plurality of rings, each ring having different aperture dimensions. Nevertheless, Amano teaches the use of a plurality of rings having various sized apertures in order to cut corneal flaps of differing sizes (Col. 1, lines 49-55). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to offer a plurality of aspherical rings differing in aperture size to enable a surgeon to cut flaps of various sizes.

Claims 21-31 are rejected under 35 U.S.C. 103(c) as being obvious over U.S. Patent No. 6,506,198 to Amano in view of U.S. Pub. No. 2003/0045895 to Ross et al. Amano discloses a microkeratome (Fig. 2) comprising a ring having an annular vacuum channel (Col. 5, lines 50-51), a blade, a head to manipulate the blade, a compression device 24, and a drive means 11,12. Amano further discloses in Fig. 2 a beveled engaging surface that forms the shape of the ring aperture. Using the terminology of the present application, the engaging surface would be referred to as the superior engaging surface. This surface may be divided into two parts, exactly as described in the rejection over Hellenkamp. The result is a "superior" and an "inferior" engaging surface.

Amano fails to disclose that the inferior and superior engaging surfaces are aspherical. Nevertheless, Ross teaches a vacuum ring insert 274' (Figs. 18-20) that is aspherical, specifically elliptical (Paragraph 66). The patent teaches that the elliptical nature of the ring insert "allows the flap 286 to be longer and provides additional corneal

Art Unit: 3731

area that can be ablated in a LASIK procedure." Ross' ring insert is comparable to Amano's ring since it is the insert that engages the surface of the eye. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Amano's circular shaped ring to be elliptical, as taught by Ross, to "allow[s] the flap 286 to be longer and provide[s] additional corneal area that can be ablated in a LASIK procedure."

Amano discloses a horizontal cutting path.

Claim 32 is rejected under 35 U.S.C. 103(c) as being obvious over U.S. Patent No. 6,506,198 to Amano in view of U.S. Pub. No. 2003/0045895 to Ross et al. and in further view of U.S. Patent No. 6,030,398 to Klopotek. The Amano/Ross device fails to disclose a pendular cutting path. Nevertheless, Klopotek teaches a cutting device used to remove a lamellar segment from the cornea. Col. 7, lines 26-29 teach that the cutting path is pendular. Horizontal cutting paths require that the cornea be moved outwardly from within the engaging ring. Undesirably, suction is lost when the cornea is moved outwardly. Therefore, it would have been obvious to one of ordinary skill in the art to make a pendular cutting path as taught by Klopotek in order to prevent the cornea from being moved outwardly and in turn causing a loss of suction.

***Conclusion***

Applicant's amendment necessitated the new grounds of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Art Unit: 3731


Any inquiry concerning this communication or earlier communications from the examiner should be directed to D. Jacob Davis whose telephone number is (703) 305-1232. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael J. Milano can be reached on (703) 308-2496. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9302.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0858.

  
DJD

November 10, 2003

  
MICHAEL J. MILANO  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3700